

INTISARI

Penelitian ini bertujuan untuk mengetahui pengaruh nefroprotektif pemberian jangka panjang infusa biji alpukat (*Persea americana* Mill.) berdasarkan kadar kreatinin serum dan gambaran histologis ginjal tikus jantan galur Wistar yang terinduksi karbon tetraklorida (CCl₄), serta mendapatkan besar dosis efektif pemberian infusa biji alpukat (*Persea americana* Mill.).

Jenis penelitian bersifat eksperimental murni dengan rancangan acak lengkap pola searah. Penelitian ini menggunakan tikus jantan galur Wistar, umur 2-3 bulan, berat badan \pm 150-250 gram. Tikus dibagi secara acak ke dalam enam kelompok perlakuan, masing-masing kelompok terdiri dari 5 ekor tikus. Kelompok I (kontrol nefrotoksin) diberi karbon tetraklorida 2 mL/kgBB secara *intraperitoneal*. Kelompok II (kontrol negatif) diberi *olive oil* 2 mL/kgBB. Kelompok III (kontrol infusa) diberikan infusa biji alpukat (*Persea americana* Mill.) dosis 1142,86 mg/kgBB. Kelompok IV-VI (perlakuan) berturut-turut diberi infusa biji alpukat (*Persea americana* Mill.) dengan dosis 360,71; 642,06; dan 1142,86 mg/kgBB secara peroral sekali sehari selama enam hari berturut-turut, pada hari ke tujuh semua kelompok perlakuan diberi induksi karbon tetraklorida dosis 2 mL/kgBB secara *intraperitoneal*. Empat puluh delapan jam pasca induksi karbon tetraklorida, darah diambil melalui *sinus orbitalis* mata untuk diukur kadar kreatinin serum dan pengambilan ginjal untuk dilakukan pencuplikan jaringan ginjal. Kadar kreatinin serum dianalisis secara statistik dengan menggunakan *One Way ANOVA* dan preparat histologis dianalisis serta dideskripsikan.

Berdasarkan hasil penelitian, infusa biji *Persea americana* Mill. memberikan efek nefroprotektif dengan menurunkan kadar kreatinin serum pada tikus yang terinduksi karbon tetraklorida. Gambaran histologis belum dapat dibandingkan hasilnya karena gambaran histologis kelompok nefrotoksin tidak mengalami perubahan yang berarti secara patologis. Jadi infusa biji *Persea americana* Mill. dosis 360,71; 642,06; dan 1142,86 mg/kgBB memiliki efek nefroprotektif berturut-turut 100%; 80,95%; dan 61,90% berdasarkan kadar kreatinin serum. Dosis efektif infusa biji *Persea americana* Mill. yang memberikan efek nefroprotektif paling efektif adalah 360,71 mg/kgBB.

Kata kunci : *Persea americana* Mill., infusa, nefroprotektif, karbon tetraklorida, kreatinin serum

ABSTRACT

The purpose of this research is to determine the nephroprotective effect of infusion of avocado's seeds (*Persea americana* Mill.) based on creatinine serum level and renal histology of male rats strained Wistar induced carbon tetrachloride (CCl₄), and also to determine the effective dose of infusa of avocado's seeds (*Persea americana* Mill.).

This study purely using randomized experimental design, complete with its unidirectional pattern. The subject of these studies were male rats of Wistar strain, aged 2-3 months, and \pm 150-250 gram for its weight. Rats were divided into six groups randomly, each group consist of five rats. Group I (nephrotoxin control) was given carbon tetrachloride 2 mL/kgBW i.p. Group II (negative control) was given olive oil 2 mL/kgBW. Group III (infusion control) was given infusion of avocado's seeds (*Persea americana* Mill.) with the highest dose (1142.86 mg/kgBW). Group IV-VI were given infusion of avocado's seeds (*Persea americana* Mill.), the doses were 360,71; 642.06; and 1142.86 mg/kgBW orally once a day during six days continuously and then in the seventh day all of these groups were induced carbon tetrachloride 2 mL/kgBW i.p. Fourty eight hours after induced carbon tetrachloride, the blood was collected from sinus orbitalis to measure the creatinine serum level and also made the renal histology. Creatinine serum level was analyzed statistically using ANOVA one way and the renal histology was analyzed microscopically also described.

Based on these result of the research, seeds infusion of *Persea americana* Mill. gave nephroprotective effect for reducing creatinine level serum of rats induced carbon tetrachloride. Renal histology results cannot be compared because renal histology of control nephrotoxin group do not change pathologically. Thus dose infusion of avocado's seeds (*Persea americana* Mill.) 360,71; 642.06; and 1142.86 mg/kgBW had nephroprotective 100%, 80.95%, and 61.90% based on creatinine serum level. Effective dose of infusion of avocado's seeds (*Persea americana* Mill.) which gave the most effective nephroprotective effect was 360,71 mg/kgBW.

Keywords : *Persea americana* Mill., infusa, nephroprotective, carbon tetrachloride, creatinine serum